

REG Geismar Inspection documentation LOG

| <i>No</i> | <i>Dated</i> | <i>Document Description and reference to Checklist item.</i> |
|-----------|--------------|--|
| 1 | 02/24/16 | Tier Two Report |
| 2 | 2014 rev | WCS Circle map (pg.4, #27) |
| 3 | 07/29/14 | Consequences of Deviation (pg 8; #15) |
| 4 | various | Training Certificates (pg 9; #22) |
| 5 | 07/09/10 | Pressure Relief Valve Test Report (pg 9, #27) |
| 6 | 06/15/15 | Annual Fire Sprinkler System Inspection Report (pg 9; #30) |

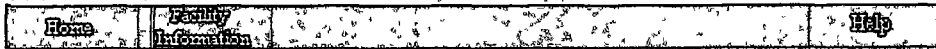
9680220



1

TIER II Facility Report

LOUISIANA CHEMICAL NETWORK



Click your browser's "Print" icon to print this page.

*** Wed Feb 24 06:41:49 CST 2016 ***

*** Facility Identification ***

Facility Name REG GEISMAR, LLC
Facility ID 47728
Facility Type Fixed
Physical Address 36187 HWY 30
GEISMAR LA, 70734
ASCENSION PARISH
Latitude 30.201975
Longitude -90.009401
Mailing Address PO BOX 599
GEISMAR LA, 70734
Telephone 225-744-1302

Reporting Period January 1 to December 31, 2015
Status Active

NAICS Code 324110
SIC Code 2869
Dun & Bradstreet # 829825178
TRI ID 7073WDYNMC36187
RMP ID 100000210611

*** Owner Information ***

Company Name REG GEISMAR, LLC
Mailing Address PO BOX 599
GEISMAR LA, 70734
Phone 225-744-1300
Fax 225-673-6235
Email PETER.GUAY@REGI.COM

*** Emergency Contact ***

Name TROY S HARRIS
Title EHS COORDINATOR
Phone 225-744-1316
24Hr Phone 225-744-1300
Pager
Fax
Cell Phone 225-252-3250
Email TROY.HARRIS@REGI.COM

*** Emergency Contact ***

Name HOWARD R WIKLINSON
Title EH&S COORDINATOR
Phone 225-744-1306
24Hr Phone 225-715-4550
Pager
Fax
Cell Phone 225-715-4550
Email TROY.HARRIS@REGI.COM

*** Filing Information ***

Chemicals 8
Number of Employees No
less than or equal
to 9?
Annual Gross Receipts under
Two Million? No
Facilities 1
Exemptions None
Amount 65.00
Invoice # 28965838

Pressure Ambient
Temperature Ambient
Location TANK FARM
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

* * * Chemical Mixture Description * * *

Trade Name RENEWABLE LIQUEFIED PETROLEUM GAS
Common Name LIQUEFIED PETROLEUM GAS
Chemical State Gas
Last Reviewed Date 02/23/2016

* * * EPA Information * * *
Trade Secret & No
Approved by EPA?

* * * Mixture Components * * *

Proper Chemical PROPANE
CAS# 74986 67%

Proper Chemical ISO BUTANE
CAS# 75285 18%

Proper Chemical NORMAL BUTANE
CAS# 106978 10%

Proper Chemical ISOPENTANE
CAS# 78784 3%

* * * Hazards * * *

Physical Fire
Sudden Release of Pressure
Reportable Quantity 100 Lbs.

*** Inventory ***
Max Daily Amount 9999
Avg Daily Amount 74999
Days On Site 90

*** Storage Types and Storage Locations ***

Container Type(s) Above Ground tank
Pressure Greater than ambient
Temperature Ambient
Location TANK FARM
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

Pressure -SEL
Temperature -SEL
Location
Confidential No
Location

*** Chemical Mixture Description ***

Trade Name RENEWABLE NAPHTHA
Common Name NAPHTHA
Chemical State Liquid
Last Reviewed Date 02/23/2016

*** EPA Information ***
Trade Secret & No
Approved by EPA?

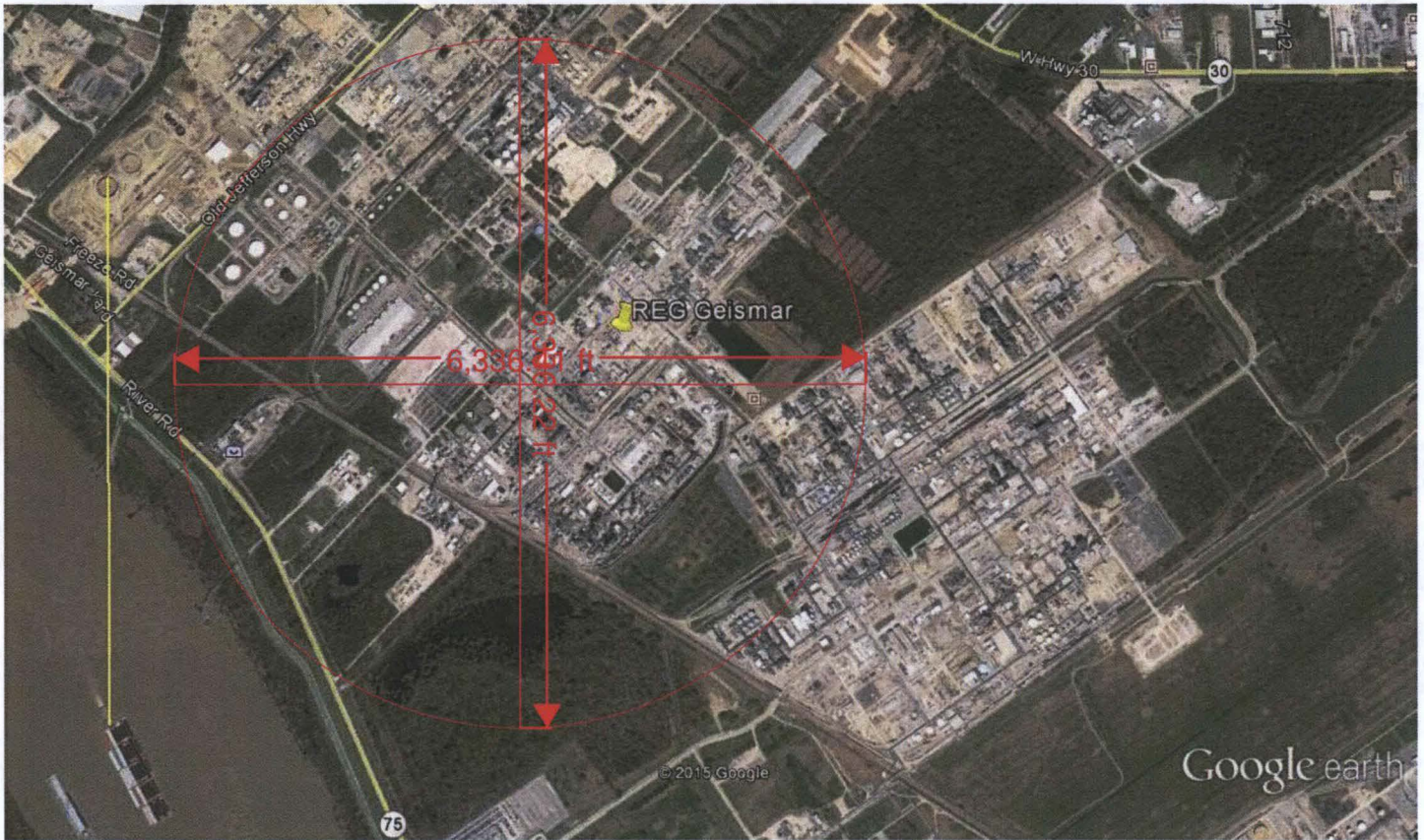
*** Mixture Components ***

Proper Chemical 2,2,3-TRIMETHYLBUTANE
CAS# 464062 14%

Proper Chemical 2,2,3-TRIMETHYLPENTANE
CAS# 564023 13%

Proper Chemical 2,3-DIMETHYLBUTANE
CAS# 79298 12%

Proper Chemical 2,4,4-TRIMETHYLHEXANE



Google earth



Worksheet

Page: 140

Company: Renewable Energy Group (REG)

Facility: REG, Geismar

Table of contents

Session: (2) 7/29/2014

Node: (140) LPG - YELLOW

Intention: Pressure: 130 psig Temperature: Ambient Phase: Liquid & Vapor Flow: 12 GPM

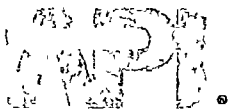
Drawings: 60-0008 REV 8

Components: Vessel 60-V-6028

| DEVIATION | CAUSES | CONSEQUENCES | SAFEGUARDS | S | L | R | REF# | RECOMMENDATIONS |
|-------------------|---|---|---|---|---|----|------|-----------------|
| 1982. Low/No Flow | 1982.1. Pumps are down when they should run | Delay in truck loading - Operational issue only | | | | | | |
| | 1982.2. Tank is empty | Potential pump damage with seal fire - 2,1,2 | LT-6023 provides low level alarm | 2 | E | TR | | |
| | | | LT-6012 provides low level alarm | | | | | |
| | 1982.3. HV-6001 or manual valves are blocked between the tank and the pumps | Potential pump damage with seal fire - 2,1,2 | Double seal pump design is resistant to atmospheric leakage | 2 | D | TR | | |
| | | | LEL monitors in area | | | | | |
| | | | Fire suppression equipment is available | | | | | |
| 1983. More/High | 1983.1. No | | | | | | | |

CH

4



AMERICAN PETROLEUM INSTITUTE
INDIVIDUAL CERTIFICATION PROGRAMS

API Individual Certification Programs

certifies that

David S. Thoman

has met the requirements to be a certified

API-570 Piping Inspector

Certification Number *1336*

Original Certification Date *January 31, 1997*

Current Certification Date *June 30, 2013*

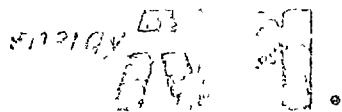
Expiration Date *June 30, 2016*

Tina Briskin

Manager, Individual Certification Programs



ICP



AMERICAN PETROLEUM INSTITUTE
Individual Certification Programs: ICP™

API Individual Certification Programs

certifies that

David S. Thoman

has met the requirements to be a certified

API-510 Pressure Vessels Inspector

Certification Number *1608*

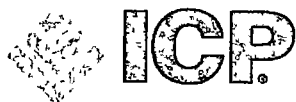
Original Certification Date *January 31, 1997*

Current Certification Date *January 31, 2015*

Expiration Date *January 31, 2018*

Tina Briskin

Manager, Individual Certification Programs





AMERICAN PETROLEUM INSTITUTE
INDIVIDUAL CERTIFICATION PROGRAMS

API Individual Certification Programs

certifies that

Christine Anne Simmons

has met the requirements to be a certified

API-570 Piping Inspector

Certification Number *53963*

Original Certification Date *July 31, 2014*

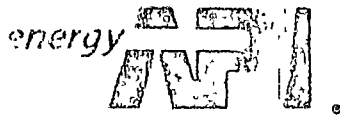
Current Certification Date *July 31, 2014*

Expiration Date *July 31, 2017*

Tina Briskin

Manager, Individual Certification Programs





AMERICAN PETROLEUM INSTITUTE
INDIVIDUAL CERTIFICATION PROGRAMS

API Individual Certification Programs

certifies that

David S. Thoman

has met the requirements to be a certified

API-653 Aboveground Storage Tanks Inspector

Certification Number *1469*

Original Certification Date *September 30, 1994*

Current Certification Date *September 30, 2015*

Expiration Date *September 30, 2018*

Tina Briskin

Manager, Individual Certification Programs





AMERICAN PETROLEUM INSTITUTE
INDIVIDUAL CERTIFICATION PROGRAMS

API Individual Certification Programs

certifies that

Christine Anne Simmons

has met the requirements to be a certified

*API-653 Aboveground Storage Tank
Inspector*

Certification Number *62952*

Original Certification Date *January 31, 2016*

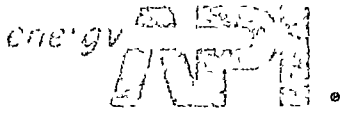
Current Certification Date *January 31, 2016*

Expiration Date *January 31, 2019*

Tina Briskin

Manager, Individual Certification Programs





AMERICAN PETROLEUM INSTITUTE
Individual Certification Programs: ICP™

API Individual Certification Programs

certifies that

Christine Anne Simmons

has met the requirements to be a certified

API-510 Pressure Vessels Inspector

Certification Number: *54963*

Original Certification Date *November 30, 2014*

Current Certification Date *November 30, 2014*

Expiration Date *November 30, 2017*

Tina Briskin

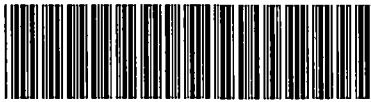
Manager, Individual Certification Programs





New Pressure Relief Valve Test Report

S3-Six Sigma Service
Type: SRV



155185-252718

Birth # 002ECN
Date Friday, July 09, 2010
Warehouse Date-Time 2009/10/29-10 00
Ship Date-Time 2009/11/02-8 00

Owner Dynamic Fuels
Plant Geismar, LA
Account # 30657
PO # 4506429249

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-----------------------------|------------------------------------|--|----------------------------------|----------------------|-----|------------------------|-----|---------------|-----|---------------|-----|------------------------|-----|-------------------------------|-----|-------------------------------|-----|--------------------|-----|------------------------|-----|------------------------|-----|---------------------------|-----|-----------------------|-----|
| Tag Number Most Recent | PSV-6019 Yes (Relief Valve) | Location Unit | Other Tag Data Client Stock# | PROJ EN0423 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer Model Number | Consolidated 1910-00PC-2-CC-MS-31-RF-GS-HP | Valve Size & Orifice S/N | 4 00 P 6 00 = 6 38 IN^2 SA49635 | In/Outlet Rating Cap Type | 300# RF / 150# RF Screwed Cap | | | | | | | | | | | | | | | | | | | | | | | | |
| Soft Seat Mat'l | N/A | Soft Seat P/N | N/A | Special Cleaning? | No | | | | | | | | | | | | | | | | | | | | | | | | |
| Service | Compressible | Product Name | LPG Hydrocarbon | Applicable Code | Sec VIII | | | | | | | | | | | | | | | | | | | | | | | | |
| Set Pressure | 250 PSIG | Total Back Pressure | 9 PSIG | Cold Diff Set Press | 246 PSIG | | | | | | | | | | | | | | | | | | | | | | | | |
| Operating Temp | 103 F | BP Is / Constant | Constant 4 | ASME Capacity | 33719 SCFM | | | | | | | | | | | | | | | | | | | | | | | | |
| Mfg Lift | IN | Restricted Lift | IN | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Req'd Spring | O645CR | Material | Alloy Steel (CR) | From / To | 229 to 260 | | | | | | | | | | | | | | | | | | | | | | | | |
| Hydro Verified? | Yes | Gauge 1 S/N | PT2 | <div>Final Preparation Checklist<table><tr><td>Birth# Matches Valve</td><td>Yes</td></tr><tr><td>Client Req'ments Check</td><td>Yes</td></tr><tr><td>Valve Painted</td><td>Yes</td></tr><tr><td>Valve Boarded</td><td>Yes</td></tr><tr><td>Client ID Tag Attached</td><td>Yes</td></tr><tr><td>Nameplate/Req'd Tags Attached</td><td>Yes</td></tr><tr><td>Replacement Parts Pres Tested</td><td>N/A</td></tr><tr><td>Code Stamp Applied</td><td>Yes</td></tr><tr><td>Ext Adjustments Sealed</td><td>Yes</td></tr><tr><td>Lever Adj'd & Strapped</td><td>N/A</td></tr><tr><td>Flg Cover/Plugs Installed</td><td>Yes</td></tr><tr><td>Sp Clean Valve Bagged</td><td>N/A</td></tr></table></div> | | Birth# Matches Valve | Yes | Client Req'ments Check | Yes | Valve Painted | Yes | Valve Boarded | Yes | Client ID Tag Attached | Yes | Nameplate/Req'd Tags Attached | Yes | Replacement Parts Pres Tested | N/A | Code Stamp Applied | Yes | Ext Adjustments Sealed | Yes | Lever Adj'd & Strapped | N/A | Flg Cover/Plugs Installed | Yes | Sp Clean Valve Bagged | N/A |
| Birth# Matches Valve | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client Req'ments Check | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Valve Painted | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Valve Boarded | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client ID Tag Attached | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nameplate/Req'd Tags Attached | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Replacement Parts Pres Tested | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code Stamp Applied | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ext Adjustments Sealed | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lever Adj'd & Strapped | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Flg Cover/Plugs Installed | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sp Clean Valve Bagged | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Checked-In By | K Joseph | Gge 2/EVT S/N | PT9 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parts Inspect By | K Joseph | Final Test Press | 249 PSIG | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measured Lift | IN | Reseat Press | PSIG | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disc Rock | IN | Seats Tight @ | 224 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Overlap Collar | IN | BP Test @ | Passed @ 30 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Assembled By | K Joseph | Date Tested | 2009/11/02 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BD Ring-Up | Notches | Tested By | K Joseph | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BD Ring-Low | 12 Notches | Witnessed By | M Chaisson | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test Media | Air | Final Inspected By | M Chaisson | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test Method | Bench | CI/QC Inspector | K Patrick | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments PRO AS070 REV 16 - MACHINE SPRING WASHERS | | | | Description | | | | | | | | | | | | | | | | | | | | | | | | | |

CUSTOMER: DYNAMIC FUELS LLC

ADDRESS: GEISMAR, LA

PURCHASE ORDER: 10008121-2

RELIEF VALVE INSPECTION AND SERVICE RECORD

| | | | |
|-------------------------------------|----------------------|--------------------|---------------------|
| Valve No. PSV-6019 | Service VAPOR | Location | Capacity 33719 SCFM |
| Type. 1910-00PC-2-CC-MS-31-RF-GS-HP | Make CONSOLIDATED | Serial No. SA49635 | Set Pressure 250# |
| Inlet Size 4" 300# | Outlet Size 6" 150# | Orifice P | Back Pressure 4 |
| Inlet Conn. FLG RIF | Outlet Conn. FLG RIF | Spring No. O-645 | |
| Materials & Special Features | | Disc SS | Nozzle SS |
| | | Spring CS | Body CS |
| | | Bonnet CS | Cap CS |
| | | BelloWS | O-Ring |

| DATE REPAIRED | POP TEST AS REQUIRED | RESET | REPAIR AND REMARKS | PARTS USED | PARTS REQ'D. NEXT OVERHAUL |
|---------------|--|-------|---|------------|----------------------------|
| Jun 27, 2013 | operable opened AT 249# Leaking AT 184 | 250# | (1) VALVE SEATS ADJUSTED ALSO build-up on internals. Complete overhaul and set 250# C.S. 246 Good ACTION Tight 222#. B.P. Tested Good. | none | |

(1) Disassemble, Chemically Clean Parts, Inspect Parts, Machine Parts as Required, Lap Nozzle and Disc, Assemble. Test, Paint, Install Cap and Nameplate.

INSPECTION CERTIFICATE

THIS VALVE HAS BEEN INSPECTED, REPAIRED AS REQUIRED, AND SET TO YOUR REQUIREMENTS BY

GULF VALVE SERVICE CO., LLC

14045 JEFFERSON HWY.
BATON ROUGE, LA 70817
TELEPHONES
225-753-0811
225-753-3471 FAX

State and Factory Authorized Service
We Repair All Makes Of Valves • New Warranties On All Repairs
Consolidated Valve Setting & Stock Distributor
Pickup & Delivery Field Service

P.O. BOX 86180
BATON ROUGE, LA 70879
NIGHTS/SUNDAYS/HOLIDAYS
225-752-1943
225-767-8660
info@gulfvalveservice.com

GULF VALVE SERVICE CO., LLC
BATON ROUGE, LOUISIANA

Date: June 27, 2013

Inspected By: *B. H. [Signature]*

1500 LB. STEAM TEST FACILITIES

**Consolidated****Consolidated Safety Relief Valve Sizing and Selection Report**

SRVS6.2 (Build 6.2.0.1056 - 8/18/2009)

7/9/2010

Dresser Inc. - Consolidated Pressure Relief Valves - Alexandria, LA, USA

DMC - CARTER CHAMBERS, LLC

13949 River Road

Luling, LA 70070

Prepared by Michelle St Pierre

Checked by

Spec Sheet No

Rev No

Customer Information

Name DYNAMIC FUELS

Location Geismar, LA

Contract

Project

Tag Number PSV-6019

P&ID Number - Location -

Valve Type 1910-00PC-2-CC-MS-31-RF-GS-HP
Gag Required No

Inlet Connection

Specified 4 00 Flg 300# Rf

Selected 4 00 Flg 300# Rf

Outlet Connection

Specified 6 00 Flg 150# Rf

Selected 6 00 Flg 150# Rf

Sizing Data

Design Code ASME Section VIII

Sizing Basis Fire SRV Calc - Required Capacity

Fluid LPG / HYDROCARBON

Fluid State Gas

M 44 8000

Z 0 6900

k 1 100

C 327

Kd (vapor) Kd (liquid) 0 975

Kb Kw 1 000

Ksh Kn

G Density @ P1

Viscosity Kv

Overpressure 21 00 %

Kc 1 000

Pressure

Operating Set 160 00 250 00 Psig

MAWP 250 00 Psig

Flowing 317 20 Psia

Superimposed Minimum 4 00 Psig

Superimposed Maximum 4 00 Psig

Builtup Total BP 5 00 9 00 Psig

Barometric 14 70 Psia

Temperature

Operating 103 00 F

Relieving 300 00 F

Design 300 00 F

Flow Area

Required 8 8371 in2

Selected Designation 6 3800 in2 P

Standard API Effective

Capacity

Required 261,217 0 Lb/hr

Selected 188,587 9 Lb/hr

Nameplate 33,720 SCFM

Reaction Force 2,218 lbs

Noise Level 146 DBa @ 3 ft

Valve Number 1
4P6**Notes**

Valve sizing based on customer required capacity of 261,217 PPH

**Consolidated****Consolidated Safety Relief Valve Sizing and Selection Report**

SRVS6 2 (Build 6 2.0 1056 - 8/18/2009)

7/9/2010

Dresser Inc. - Consolidated Pressure Relief Valves - Alexandria, LA, USA

| | | | |
|--------------|-------------------------------|----------|---------------|
| Tag Number | PSV-6019 | | |
| Valve Number | 1 | | |
| Contract | | Client | DYNAMIC FUELS |
| Project | | Location | Geismar, LA |
| Valve Type | 1910-00PC-2-CC-MS-31-RF-GS-HP | | |
| Gag Required | No | | |

Equation Used To Size Consolidated Safety Relief Valves

$$A_c = \frac{W \sqrt{T} \sqrt{Z}}{C K_d P_1 \sqrt{M K_b K_c K_u}}$$

$$8.8371 = \frac{261,217.0000 * \text{sqrt}(760.0 * 0.6900)}{327.000 * 0.975 * 317.2000 * \text{sqrt}(44.8000) * 1.000 * 1.000 * 1.000000000}$$

$$A = 6.3800 \text{ in}^2$$

Vapors or Gases - Mass Flow Rate Sizing

(W = lb/hr) Fluid Name - LPG / HYDROCARBON

**Consolidated****Consolidated Safety Relief Valve Sizing and Selection Report**

SRVS6.2 (Build 6.2 0 1056 - 8/18/2009)

7/9/2010

Dresser Inc. - Consolidated Pressure Relief Valves - Alexandria, LA, USA

| | | | |
|--------------|-------------------------------|----------|---------------|
| Tag Number | PSV-6019 | | |
| Valve Number | 2 | | |
| Contract | | Client | DYNAMIC FUELS |
| Project | | Location | Geismar, LA |
| Valve Type | 1910-00NC-2-CC-MS-31-RF-GS-HP | | |
| Gag Required | No | | |

Equation Used To Size Consolidated Safety Relief Valves

$$A_c = \frac{W \sqrt{T} \sqrt{Z}}{C K_d P_1 \sqrt{M} K_b K_c K_s}$$

$$8\,8371 = \frac{261,217.0000 * \text{sqrt}(760.0 * 0.6900)}{327\,000 * 0.975 * 317\,2000 * \text{sqrt}(44.8000) * 1\,000 * 1.000 * 1\,00000000}$$

$$A = 4\,3400 \text{ in}^2$$

Vapors or Gases - Mass Flow Rate Sizing

(W = lb/hr) Fluid Name - LPG / HYDROCARBON



Consolidated

Consolidated Safety Relief Valve Sizing and Selection Report

SRVS6.2 (Build 6.2.0.1056 - 8/18/2009)

7/9/2010

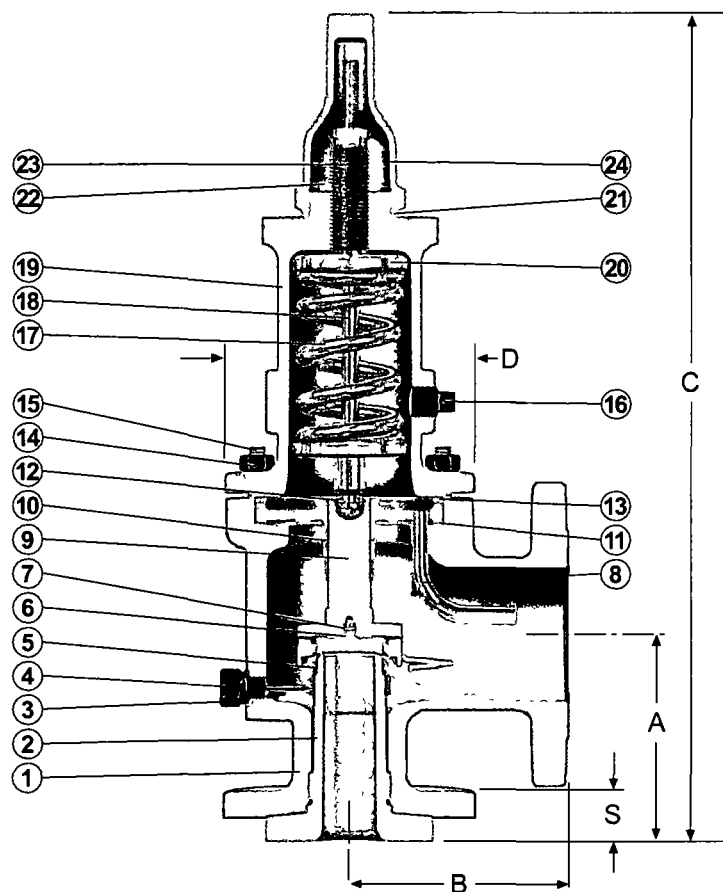
Dresser Inc. - Consolidated Pressure Relief Valves - Alexandria, LA, USA

| | | | | | | | | | | |
|--------------------|-------------------------------|----|--------------|------|----------|---------------|--------|-----|----------|--|
| Tag Number | PSV-6019 | | | | | | | | | |
| Valve Type | 1910-00PC-2-CC-MS-31-RF-GS-HP | | | | | | | | | |
| P&ID No - Location | - | | Valve Number | 1 | Client | DYNAMIC FUELS | | | | |
| Spec Sheet Number | | | Rev Number | | Location | Geismar, LA | | | | |
| Inlet | 4 00 | in | Flg | 300# | Rf | Area | 6 3800 | in2 | Contract | |
| Outlet | 6 00 | in | Flg | 150# | Rf | | | | Project | |

Certified by Dresser Consolidated

DIMENSIONS &

A 225 4 mm -- 8-7/8 in
B 254 0 mm -- 10 in
C 1041 4 mm -- 41 in
D 292 1 mm -- 11-1/2 in
S 49 2 mm -- 1-15/16 in
Weight 158 8 kg -- 350 lb



Valve picture is for reference only
and is not to scale

BILL OF MATERIALS

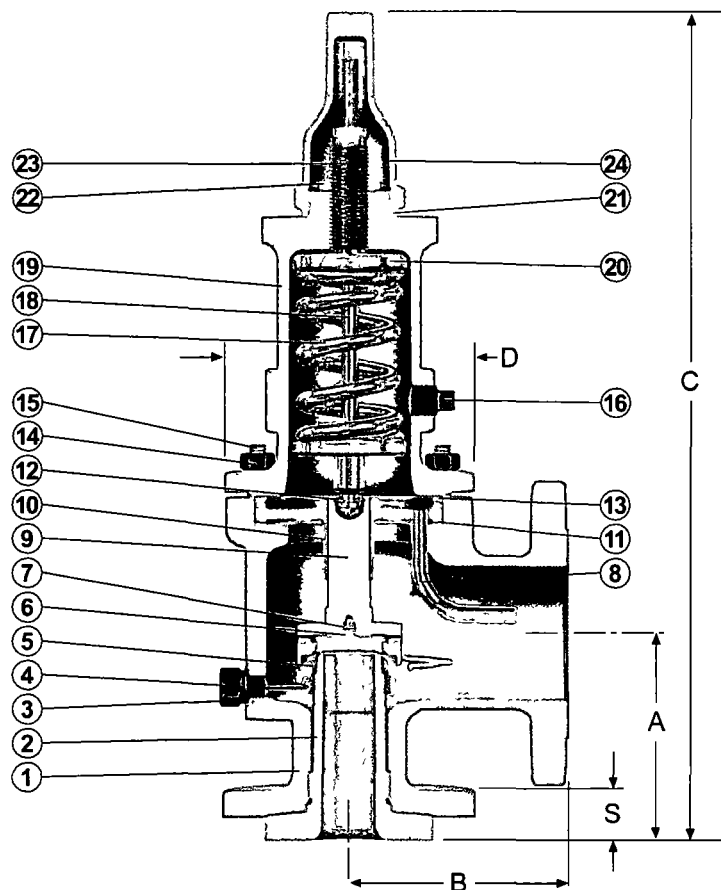
| PARTNAME | MATERIAL |
|------------------------|-----------------------------|
| 1 BASE | ASME SA216 WCC CARBON STEEL |
| 2 NOZZLE | 316 STAINLESS STEEL |
| 3 ADJ RING PIN GASKET | SOFT IRON |
| 4 ADJUSTING RING PIN | 316 STAINLESS STEEL |
| 5 ADJUSTING RING | 316 STAINLESS STEEL |
| 6 DISC | 316 STAINLESS STEEL |
| 7 DISC RETAINER | INCONEL X-750 |
| 8 REDUCTOR TUBE | 316 STAINLESS STEEL |
| 9 DISC HOLDER | 316 STAINLESS STEEL |
| 10 GUIDE | 316 STAINLESS STEEL |
| 11 GUIDE GASKET | SOFT IRON |
| 12 SPINDLE RETAINER | INCONEL X-750 |
| 13 BONNET GASKET | SOFT IRON |
| 14 STUD NUTS | ASME SA194 2H CARBON STEEL |
| 15 BASE STUDS | ASME SA193 B7 ALLOY STEEL |
| 16 VENT PIPE PLUG | CARBON STEEL |
| 17 SPRING | ALLOY STEEL |
| 18 SPINDLE | 410 STAINLESS STEEL |
| 19 BONNET | ASME SA216 WCC CARBON STEEL |
| 20 SPRING WASHER | CARBON STEEL |
| 21 CAP GASKET | SOFT IRON |
| 22 ADJUSTING SCREW NUT | 416 STAINLESS STEEL |
| 23 ADJUSTING SCREW | 416 STAINLESS STEEL |
| 24 CAP | CARBON STEEL |
| NOT SHOWN BASE PLUG | CARBON STEEL |

| | | | | | | | |
|--------------------|-------------------------------|----|-----|--------------|----|----------|---------------|
| Tag Number | PSV-6019 | | | | | | |
| Valve Type | 1910-00NC-2-CC-MS-31-RF-GS-HP | | | | | | |
| P&ID No - Location | - | | | Valve Number | 2 | Client | DYNAMIC FUELS |
| Spec Sheet Number | | | | Rev Number | | Location | Geismar, LA |
| Inlet | 4 00 | in | Flg | 300# | Rf | Area | 4 3400 in2 |
| Outlet | 6 00 | in | Flg | 150# | Rf | Contract | |
| | | | | | | Project | |

Certified by Dresser Consolidated

DIMENSIONS &

A 196 9 mm -- 7-3/4 in
 B 209 6 mm -- 8-1/4 in
 C 870 0 mm -- 34-1/4 in
 D 266 7 mm -- 10-1/2 in
 S 49 2 mm -- 1-15/16 in
 Weight 117 9 kg -- 260 lb



Valve picture is for reference only
and is not to scale

BILL OF MATERIALS

| PARTNAME | MATERIAL |
|------------------------|-----------------------------|
| 1 BASE | ASME SA216 WCC CARBON STEEL |
| 2 NOZZLE | 316 STAINLESS STEEL |
| 3 ADJ RING PIN GASKET | SOFT IRON |
| 4 ADJUSTING RING PIN | 316 STAINLESS STEEL |
| 5 ADJUSTING RING | 316 STAINLESS STEEL |
| 6 DISC | 316 STAINLESS STEEL |
| 7 DISC RETAINER | INCONEL X 750 |
| 8 EDUCTOR TUBE | 316 STAINLESS STEEL |
| 9 DISC HOLDER | 316 STAINLESS STEEL |
| 10 GUIDE | 316 STAINLESS STEEL |
| 11 GUIDE GASKET | SOFT IRON |
| 12 SPINDLE RETAINER | INCONEL X 750 |
| 13 BONNET GASKET | SOFT IRON |
| 14 STUD NUTS | ASME SA194 2H CARBON STEEL |
| 15 BASE STUDS | ASME SA193 B7 ALLOY STEEL |
| 16 VENT PIPE PLUG | CARBON STEEL |
| 17 SPRING | ALLOY STEEL |
| 18 SPINDLE | 410 STAINLESS STEEL |
| 19 BONNET | ASME SA216 WCC CARBON STEEL |
| 20 SPRING WASHER | CARBON STEEL |
| 21 CAP GASKET | SOFT IRON |
| 22 ADJUSTING SCREW NUT | 416 STAINLESS STEEL |
| 23 ADJUSTING SCREW | 416 STAINLESS STEEL |
| 24 CAP | CARBON STEEL |
| NOT SHOWN BASE PLUG | CARBON STEEL |

**Consolidated****Consolidated Safety Relief Valve Sizing and Selection Report**

SRVS6 2 (Build 6 2.0.1056 - 8/18/2009)

7/9/2010

Dresser Inc. - Consolidated Pressure Relief Valves - Alexandria, LA, USA

| | | | | | |
|---|--------------|-----------------------------------|--------|--|----|
| DMC - CARTER CHAMBERS, LLC 13949 River Road Luling, LA 70070 Prepared by Michelle St Pierre Checked by _____ Spec Sheet No _____ Rev No _____ | | | | Customer Information Name DYNAMIC FUELS Location Geismar, LA Contract _____ Project _____ | |
| Tag Number | | PSV-6019 | | Valve Number 2 | |
| P&ID Number - Location | | - | | 4N6 | |
| Valve Type | | 1910-00NC-2-CC-MS-31-RF-GS-HP | | | |
| Gag Required | | No | | | |
| Inlet Connection | | | | | |
| Specified | | 4 00 | Flg | 300# | Rf |
| Selected | | 4 00 | Flg | 300# | Rf |
| Outlet Connection | | | | | |
| Specified | | 6 00 | Flg | 150# | Rf |
| Selected | | 6 00 | Flg | 150# | Rf |
| Sizing Data | | | | | |
| Design Code | | ASME Section VIII | | | |
| Sizing Basis | | Fire SRV Calc - Required Capacity | | | |
| Fluid | | LPG / HYDROCARBON | | | |
| Fluid State | | Gas | | | |
| M | | 44 8000 | | | |
| Z | | 0 6900 | | | |
| k | | 1 100 | | | |
| C | | 327 | | | |
| Kd (vapor) | Kd (liquid) | 0 975 | | | |
| Kb | Kw | 1 000 | | | |
| Ksh | Kn | | | | |
| G | Density @ P1 | | | | |
| Viscosity | Kv | | | | |
| Overpressure | | 21 00 % | | | |
| Kc | | 1 000 | | | |
| Pressure | | | | | |
| Operating | Set | 160 00 | 250 00 | Psig | |
| MAWP | | 250 00 | Psig | | |
| Flowing | | 317 20 | Psia | | |
| Superimposed Minimum | | 4 00 | Psig | | |
| Superimposed Maximum | | 4 00 | Psig | | |
| Builtup | Total BP | 5 00 | 9 00 | Psig | |
| Barometric | | 14 70 | Psia | | |
| Temperature | | | | | |
| Operating | | 103 00 F | | | |
| Relieving | | 300 00 F | | | |
| Design | | 300 00 F | | | |
| Flow Area | | | | | |
| Required | | 8 8371 in2 | | | |
| Selected | Designation | 4 3400 in2 | N | | |
| Standard | | API Effective | | | |
| Capacity | | | | | |
| Required | | 261,217 0 Lb/hr | | | |
| Selected | | 128,287 1 Lb/hr | | | |
| Nameplate | | 22,945 SCFM | | | |
| Reaction Force | | 1,661 lbs | | | |
| Noise Level | | 144 DBa @ 3 ft | | | |

Notes

CUSTOMER: DYNAMIC FUELS LLC

ADDRESS: GEISMAR, LA

PURCHASE ORDER: 10008121-2

RELIEF VALVE INSPECTION AND SERVICE RECORD

| | | | |
|-------------------------------------|-----------------------|--------------------|---------------------|
| Valve No. PSV-6020 | Service VAPOR | Location | Capacity 22945 SCFM |
| Type. 1910-00NC-2-CC-MS-31-RF-GS-HP | Make CONSOLIDATED | Serial No. SA55748 | Set Pressure 250# |
| Inlet Size 4" 300# | Outlet Size 6" 150# | Orifice N | Back Pressure 5 |
| Inlet Conn. FLG R.F. | Outlet Conn. FLG R.F. | Spring No. O-393CR | |
| Materials & Special Features | Disc SS | Nozzle SS | Spring CR |
| | Bonnet CS | Bellevue | Body CS |
| | | O-Ring | Cap CS |

| DATE REPAIRED | POP TEST AS REQUIRED | RESET | REPAIR AND REMARKS | PARTS USED | PARTS REQ. NEXT OVERHAUL |
|---------------|--|-------|---|------------|--------------------------|
| Jun 27, 2013 | operable opened AT 248# Leaking AT 191 | 250# | (1) VALVE SEATS CUT & FITTED none Also build-up on internals. Complete overhaul and set 250# C.S. 245# Good Action Tight 220#. B.P. Tested Good. | | |

(1) Disassemble, Chemically Clean Parts, Inspect Parts, Machine Parts as Required, Lap Nozzle and Disc, Assemble. Test, Paint, Install Cap and Nameplate.

INSPECTION CERTIFICATE

THIS VALVE HAS BEEN INSPECTED, REPAIRED AS REQUIRED, AND SET TO YOUR REQUIREMENTS BY

GULF VALVE SERVICE CO., LLC

14045 JEFFERSON HWY.
BATON ROUGE, LA 70817
TELEPHONES

225-753-0811
225-753-3471 FAX

P.O. BOX 86180
BATON ROUGE, LA 70879
NIGHTS/SUNDAYS/HOLIDAYS

State and Factory Authorized Service

We Repair All Makes Of Valves • Non Warranty On All Repairs

Consolidated Valve Setting & Stock Distributor

Pickup & Delivery Field Service

225-752-1943

225-767-8660

info@gulfvalveservice.com

GULF VALVE SERVICE CO., LLC
BATON ROUGE, LOUISIANA

Date: June 27, 2013

Inspected By:



1500 LB. STEAM TEST FACILITIES





New Pressure Relief Valve Test Report

S3-Six Sigma Service

Type: SRV



171451-360819

Birth # 003A22
Date Friday, July 09, 2010
Warehouse Date-Time 2010/01/26-16 00
Ship Date-Time 2010/01/28-14 00

Owner Dynamic Fuels
Plant Geismar, LA
Account # 30657
PO # 4506429249 C/O 4

| | | | |
|------------------------------|---|-----------------------------|------------------------------------|
| Tag Number Most Recent | PSV-6020 Yes (Relief Valve) | Location Unit | Other Tag Data Client Stock# |
| Manufacturer Model Number | Consolidated 1910-00NC-2-CC-MS-31-RF-GS-HP | Valve Size & Orifice S/N | 4 00 N 6 00 = 4 34 IN^2 SA55748 |
| Soft Seat Mat'l | N/A | Soft Seat P/N | N/A |
| Service | Compressible | Product Name | LPG Hydrocarbon |
| Set Pressure | 250 PSIG | Total Back Pressure | 9 PSIG |
| Operating Temp | 103 F | BP Is / Constant | Constant 5 |
| Mfg Lift | IN | Restricted Lift | IN |
| Req'd Spring | O393CR | Material | Alloy Steel (CR) |
| Hydro Verified? | Yes | Gauge 1 S/N | PT9 |
| Checked-In By | J Boyle | Gge 2/EVT S/N | PT2 |
| Parts Inspect By | J Boyle | Final Test Press | 250 PSIG |
| Measured Lift | IN | Reseat Press | PSIG |
| Disc Rock | IN | Seats Tight @ | 225 |
| Overlap Collar | IN | BP Test @ | Passed @ 30 |
| Assembled By | J Boyle | Date Tested | 2010/01/29 |
| BD Ring-Up | None Notches | Tested By | J Boyle |
| BD Ring-Low | 13 Notches | Witnessed By | C Austin |
| Test Media | Air | Final Inspected By | C Austin |
| Test Method | Bench | CI/QC Inspector | K Patrick |

Final Preparation Checklist

| | |
|-------------------------------|-----|
| Birth# Matches Valve | Yes |
| Client Req'ments Check | Yes |
| Valve Painted | Yes |
| Valve Boarded | Yes |
| Client ID Tag Attached | Yes |
| Nameplate/Req'd Tags Attached | Yes |
| Replacement Parts Pres Tested | N/A |
| Code Stamp Applied | Yes |
| Ext Adjustments Sealed | Yes |
| Lever Adj'd & Strapped | N/A |
| Flg Cover/Plugs Installed | Yes |
| Sp Clean Valve Bagged | N/A |

Comments

PRO AS070 REV 16 - MACHINE SPRING WASHERS

Description

Valv-Keep II This historical record is stored in Valv-Keep II For more information contact Carter Chambers

AVERT

**Consolidated****Consolidated Safety Relief Valve Sizing and Selection Report**

SRVS6 2 (Build 6 2 0 1056 - 8/18/2009)

7/9/2010

Dresser Inc. - Consolidated Pressure Relief Valves - Alexandria, LA, USA

| | | | |
|--------------|-------------------------------|----------|---------------|
| Tag Number | PSV-6020 | | |
| Valve Number | 1 | | |
| Contract | | Client | DYNAMIC FUELS |
| Project | | Location | Geismar, LA |
| Valve Type | 1910-00PC-2-CC-MS-31-RF-GS-HP | | |
| Gag Required | No | | |

Equation Used To Size Consolidated Safety Relief Valves

$$A_c = \frac{W \sqrt{T} \sqrt{Z}}{C K_d P_1 \sqrt{M K_b K_c K_u}}$$

$$5.5667 = \frac{222,147.0000 * \text{sqrt}(838.0 * 0.6300)}{372.000 * 0.975 * 377.7000 * \text{sqrt}(44.8000) * 1.000 * 1.000 * 1.00000000}$$

$$A = 6.3800 \text{ in}^2$$

Vapors or Gases - Mass Flow Rate Sizing

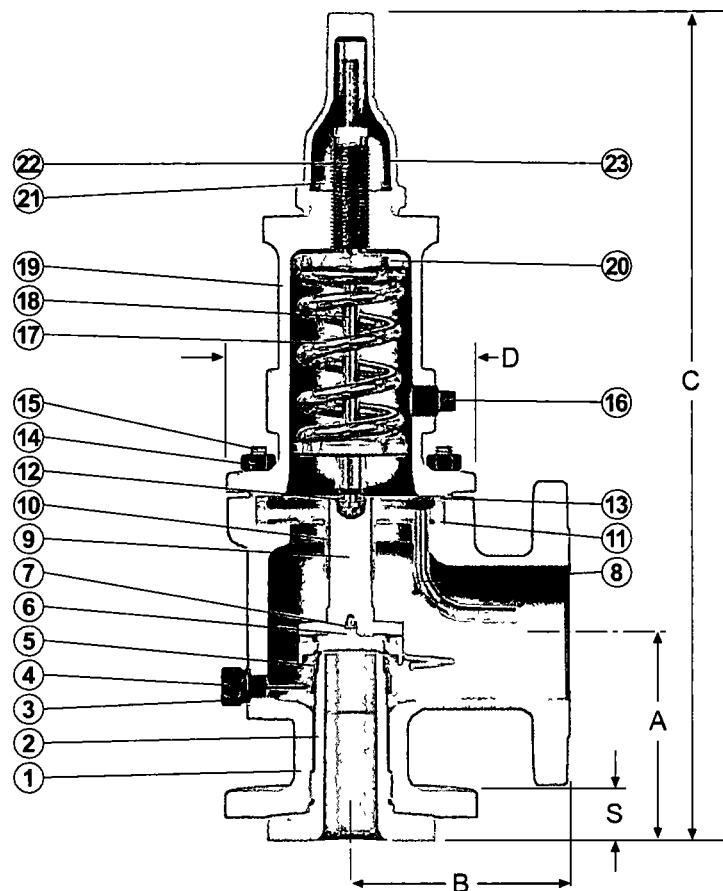
(W = lb/hr) Fluid Name - LPG / HYDROCARBON

| | | | | | | | | | |
|--------------------|-------------------------------|----|-----|--------------|----|----------|---------------|----------|--|
| Tag Number | PSV-6020 | | | | | | | | |
| Valve Type | 1910-00PC-2-CC-MS-31-RF-GS-HP | | | | | | | | |
| P&ID No - Location | - | | | Valve Number | 1 | Client | DYNAMIC FUELS | | |
| Spec Sheet Number | | | | Rev. Number | | Location | Geismar, LA | | |
| Inlet | 4 00 | in | Flg | 300# | Rf | Area | 6 3800 in2 | Contract | |
| Outlet | 6 00 | in | Flg | 150# | Rf | | | Project | |

Certified by Dresser Consolidated

DIMENSIONS &

A 225 4 mm -- 8-7/8 in
 B 254 0 mm -- 10 in
 C 1041 4 mm -- 41 in
 D 292 1 mm -- 11-1/2 in
 S 49 2 mm -- 1-15/16 in
 Weight 158 8 kg -- 350 lb



Valve picture is for reference only
and is not to scale

BILL OF MATERIALS

| PARTNAME | MATERIAL |
|------------------------|-----------------------------|
| 1 BASE | ASME SA216 WCC CARBON STEEL |
| 2 NOZZLE | 316 STAINLESS STEEL |
| 3 ADJ RING PIN GASKET | SOFT IRON |
| 4 ADJUSTING RING PIN | 316 STAINLESS STEEL |
| 5 ADJUSTING RING | 316 STAINLESS STEEL |
| 6 DISC | 316 STAINLESS STEEL |
| 7 DISC RETAINER | INCONEL X-750 |
| 8 EDUCTOR TUBE | 316 STAINLESS STEEL |
| 9 DISC HOLDER | 316 STAINLESS STEEL |
| 10 GUIDE | 316 STAINLESS STEEL |
| 11 GUIDE GASKET | SOFT IRON |
| 12 SPINDLE RETAINER | INCONEL X-750 |
| 13 BONNET GASKET | SOFT IRON |
| 14 STUD NUTS | ASME SA194 2H CARBON STEEL |
| 15 BASE STUDS | ASME SA193 B7 ALLOY STEEL |
| 16 VENT PIPE PLUG | CARBON STEEL |
| 17 SPRING | ALLOY STEEL |
| 18 SPINDLE | 410 STAINLESS STEEL |
| 19 BONNET | ASME SA216 WCC CARBON STEEL |
| 20 SPRING WASHER | CARBON STEEL |
| 21 ADJUSTING SCREW NUT | 416 STAINLESS STEEL |
| 22 ADJUSTING SCREW | 416 STAINLESS STEEL |
| 23 CAP | CARBON STEEL |
| NOT SHOWN BASE PLUG | CARBON STEEL |

**Consolidated****Consolidated Safety Relief Valve Sizing and Selection Report**

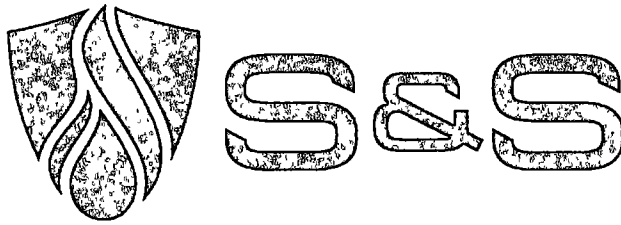
SRVS6 2 (Build 6 2.0.1056 - 8/18/2009)

7/9/2010

Dresser Inc - Consolidated Pressure Relief Valves - Alexandria, LA, USA

| | | | | | |
|---|--------------------------------------|--------|------|--|---|
| DMC - CARTER CHAMBERS, LLC 13949 River Road Luling, LA 70070 Prepared by Michelle St Pierre Checked by _____ Spec Sheet No _____ Rev No _____ | | | | Customer Information Name DYNAMIC FUELS Location Geismar, LA Contract _____ Project _____ | |
| Tag Number | PSV-6020 | | | Valve Number | 1 |
| P&ID Number - Location | - | | | 4P6 | |
| Valve Type | 1910-00PC-2-CC-MS-31-RF-GS-HP | | | | |
| Gag Required | No | | | | |
| Inlet Connection | | | | | |
| Specified | 4 00 | Flg | 300# | Rf | |
| Selected | 4 00 | Flg | 300# | Rf | |
| Outlet Connection | | | | | |
| Specified | 6 00 | Flg | 150# | Rf | |
| Selected | 6 00 | Flg | 150# | Rf | |
| Sizing Data | | | | | |
| Design Code | ASME Section VIII | | | | |
| Sizing Basis | Fire SRV Calc - Required Capacity | | | | |
| Fluid | LPG / HYDROCARBON | | | | |
| Fluid State | Gas | | | | |
| M | 44 8000 | | | | |
| Z | 0 6300 | | | | |
| k | 1 595 | | | | |
| C | 372 | | | | |
| Kd (vapor) | Kd (liquid) | 0 975 | | | |
| Kb | Kw | 1 000 | | | |
| Ksh | Kn | | | | |
| G | Density @ P1 | | | | |
| Viscosity | Kv | | | | |
| Overpressure | 21 00 % | | | | |
| Kc | 1 000 | | | | |
| Pressure | | | | | |
| Operating Set | 160 00 | 300 00 | Psig | | |
| MAWP | 300 00 | Psig | | | |
| Flowing | 377 70 | Psia | | | |
| Superimposed Minimum | 4 00 | Psig | | | |
| Superimposed Maximum | 4 00 | Psig | | | |
| Builtup Total BP | 5 00 | 9 00 | Psig | | |
| Barometric | 14 70 | Psia | | | |
| Temperature | | | | | |
| Operating | 103 00 F | | | | |
| Relieving | 378 00 F | | | | |
| Design | 300 00 F | | | | |
| Flow Area | | | | | |
| Required | 5 5667 in2 | | | | |
| Selected Designation | 6 3800 in2 | P | | | |
| Standard | API Effective | | | | |
| Capacity | | | | | |
| Required | 222,147 0 Lb/hr | | | | |
| Selected | 254,602 1 Lb/hr | | | | |
| Nameplate | 40,122 SCFM | | | | |
| Reaction Force | 3,650 lbs | | | | |
| Noise Level | 149 DBa @ 3 ft | | | | |

Notes



Annual Fire Sprinkler System Inspection

Inspector: Brett Young

Inspection Date: 6/15/2015

Inspection conducted at:

REG Geismar

BI15016029

36187 Hwy 30

Geismar LA

***Inspection performed in accordance with
NFPA 25 Standard for the Inspection, Testing, and Maintenance of Water-Based
Fire Protection Systems, 2011 edition.
Individual code references shown in () for this standard.***

2485 Burden Lane
Mobile, AL 36617
251.473.6000
toll free: 800 443.5897

14054 Jefferson Highway
Baton Rouge, LA 70817
225.753 8512
toll free: 888 432 8512

3601 Highway 90
Westlake, LA 70669
337 882 0000
toll free: 877 746.5537

2150 Wellspring Drive
Beaumont, TX 77705
409 729 444
toll free: 800.222.1204

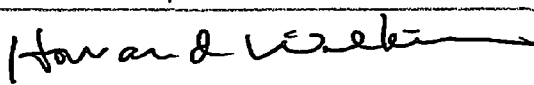
sssprinkler.com



Administrative Information

| Customer Address | Inspection Location |
|----------------------------|-----------------------|
| REG Geismar | REG Geismar |
| 416 S Bell Ave. | 36187 Hwy 30 |
| Ames, IA 50010 | Geismar, LA 70734 |
| | Phone: (225) 744-1306 |
| Inspection Date: 6/15/2015 | Contact: Mr Wilkinson |

Building owner / representative

| | |
|--|-----|
| Is building currently occupied? | Yes |
| Has building occupancy, hazard, water supply or building arrangement affecting system effectiveness remained the same since last inspection? (4 1 6 1) | Yes |
| Are all fire protection systems in service? (4 5 4) | Yes |
| Was system free of actuations or alarms since last inspection? | Yes |
| Owner/Representative Signature  | |

Summary List of Fire Protection Systems

| Items | Total Systems |
|---------------|---------------|
| Deluge System | 1 |
| Wet System | 2 |
| Total | 5 |

Deluge System

Cntrl Vlv (Del) - sealed

HDO Solvent Recycle Pumps Victaulic Series 728

| | |
|--|-----------|
| Valve type? | Butterfly |
| What is valve size? | 25" |
| Valve has proper signs, and is accessible? (13 3 2 2) | Yes |
| Valve is free of external leaks, and appropriate wrench available? (13 3 2 2) | Yes |
| Valve in normal open or closed position? (13 3 2 2) | No |
| Valve properly sealed? (13 3 2 2) | Yes |
| Valve lubricated, if required, and exercised through full range to ensure proper operation? (13 3 3 1) | Yes |

Deluge System Inspection

HDO Solvent Recycle Pumps

| | |
|--|-----|
| Sprinkler heads free of corrosion, foreign material, paint or damage, no signs of leakage and heads installed in proper orientation? (5 2 1 1 1) | Yes |
| Minimum clearance maintained below all sprinklers? (5 2 1 2) | Yes |
| Number of replacement sprinkler heads per number installed in the head box comply 6 per 1-300 12 per 301 to 1,000 24 per > 1,000? (5 4 1 5) | Yes |
| Sprinkler head wrench for each type head provided in head box? (5 4 1 6) | Yes |
| System piping free of mechanical damage, leaks, corrosion, misalignment, or other loads or pipe hung from system? (5 2 2 1 and 5 2 2 2) | Yes |
| Pipe hangers and seismic braces secure and undamaged? (5 2 3 1) | Yes |
| Adequate heat to protect part of system containing water at a minimum temperature of 40° F? (4 1 1 1) | Yes |
| All sprinklers in this building been manufactured after 1920? (5 3 1 1 1 1) | Yes |
| Sprinklers in building are less than 50 years old, or if older has sprinkler sample been tested? (5 3 1 1 1) | Yes |
| If fast response sprinklers in building are 20 years old or older has sprinkler sample been tested? (5 3 1 1 1 3) | N/A |

Deluge valve

HDO Solvent Recycle Pumps Firelock NXT 2" S/769

| | |
|--|------|
| Water pressure gauge operating properly? (5 2 4 2) | Yes |
| System control valve have proper signs, accessible and free of leaks, has appropriate wrench and properly secured? (13 3 2 2) | Yes |
| System control valve in normal open/closed position? (13 3 2 2) | No |
| Pressure (psi) shown on Water Supply pressure gauge. (13 4 3 1 3 1) | 0 |
| Exterior in good condition, all trim valves in normal position, valve seat not leaking and any electrical parts in service? (13 4 3 1 6) | Yes |
| Valve enclosure and heating equipment, during cold weather, maintain 40° F temperature? (13 4 3 1 1) | Yes |
| Drain Size | 3/4" |
| Hydraulic nameplate, if applicable, securely attached to sprinkler system and is legible? (5 2 6) | Yes |
| Is there adequate drainage available? (13 2 4) | N/A |

Water Motor Alarm - mechanical (Del)

HDO Solvent Recycle Pumps Victaulic

| | |
|---|-----|
| Water motor alarm free of damage? (5 2 5) | Yes |
| Water flow activate alarm when open test connection/bypass? (5 3 3 3) | N/A |

Water Pressure Switch (Del)

HDO Solvent Recycle Pumps System Sensor EPS-10-2

| | |
|---|-----|
| Did the switch pass a visual inspection conducted in accordance with manufacturer's requirements? | Yes |
| Did the switch pass operational tests when pressure is increased? | No |

Cntrl Vlv (Del) - sealed

HI Charge Pumps Victaulic Series 728

| | |
|--|-----------|
| Valve type? | Butterfly |
| What is valve size? | 2 5" |
| Valve has proper signs, and is accessible? (13 3 2 2) | Yes |
| Valve is free of external leaks, and appropriate wrench available? (13 3 2 2) | Yes |
| Valve in normal open or closed position? (13 3 2 2) | No |
| Valve properly sealed? (13 3 2 2) | Yes |
| Valve lubricated, if required, and exercised through full range to ensure proper operation? (13 3 3 1) | Yes |

Deluge System Inspection

HI Charge Pumps

| | |
|--|-----|
| Sprinkler heads free of corrosion, foreign material, paint or damage, no signs of leakage and heads installed in proper orientation? (5 2 1 1 1) | Yes |
| Minimum clearance maintained below all sprinklers? (5 2 1 2) | Yes |
| Number of replacement sprinkler heads per number installed in the head box comply 6 per 1-300 12 per 301 to 1,000 24 per > 1,000? (5 4 1 5) | Yes |
| Sprinkler head wrench for each type head provided in head box? (5 4 1 6) | Yes |
| System piping free of mechanical damage, leaks, corrosion, misalignment, or other loads or pipe hung from system? (5 2 2 1 and 5 2 2 2) | Yes |
| Pipe hangers and seismic braces secure and undamaged? (5 2 3 1) | No |
| Adequate heat to protect part of system containing water at a minimum temperature of 40° F? (4 1 1 1) | Yes |
| All sprinklers in this building been manufactured after 1920? (5 3 1 1.1 1) | Yes |
| Sprinklers in building are less than 50 years old, or if older has sprinkler sample been tested? (5 3 1 1 1) | Yes |
| If fast response sprinklers in building are 20 years old or older has sprinkler sample been tested? (5 3 1 1 1 3) | N/A |

Deluge valve**HI Charge Pumps Firelock NXT 2" S/769**

| | |
|--|------|
| Water pressure gauge operating properly? (5 2 4 2) | Yes |
| System control valve have proper signs, accessible and free of leaks, has appropriate wrench and properly secured? (13 3 2 2) | Yes |
| System control valve in normal open/closed position? (13 3 2 2) | No |
| Pressure (psi) shown on Water Supply pressure gauge (13 4 3 1 3 1) | 0 |
| Exterior in good condition, all trim valves in normal position, valve seat not leaking and any electrical parts in service? (13 4 3 1 6) | Yes |
| Valve enclosure and heating equipment, during cold weather, maintain 40° F temperature? (13 4 3 1 1) | N/A |
| Drain Size | 3/4" |
| Hydraulic nameplate, if applicable, securely attached to sprinkler system and is legible? (5 2 6) | Yes |
| Is there adequate drainage available? (13 2 4) | N/A |

Water Motor Alarm - mechanical (Del)**HI Charge Pumps Victaulic**

| | |
|---|-----|
| Water motor alarm free of damage? (5 2 5) | Yes |
| Water flow activate alarm when open test connection/bypass? (5 3 3 3) | N/A |

Water Pressure Switch (Del)**HI Charge Pumps System Sensor EPS-10-2**

| | |
|---|-----|
| Did the switch pass a visual inspection conducted in accordance with manufacturer's requirements? | Yes |
| Did the switch pass operational tests when pressure is increased? | No |

Air Maintenance Device (Del)**L-Con Bullets Victaulic**

| | |
|---|-----|
| Automatic air maintenance device pressure maintained at proper setting for system? (13 4 3 2 15) | Yes |
|---|-----|

Air Pressure Alarm Device (Del)**L-Con Bullets Potter-Roemer PS-40-2**

| | |
|--|-----|
| Pressure (psi) shown on the Supervisory Air Pressure gauge (13 4 3 2 13) | 30 |
| Low air pressure alarm operates? (13 4 3 2 13) | No |
| If installed, is air system air dryer operational? (5 4 2 3) | N/A |

Cntrl Vlv (Del) - sealed**L-Con Bullets Mueller**

| | |
|--|----------|
| Valve type? | OS and Y |
| What is valve size? | 6" |
| Valve has proper signs, and is accessible? (13 3 2 2) | Yes |
| Valve is free of external leaks, and appropriate wrench available? (13 3 2 2) | Yes |
| Valve in normal open or closed position? (13 3 2 2) | Yes |
| Valve properly sealed? (13 3 2 2) | Yes |
| Valve lubricated, if required, and exercised through full range to ensure proper operation? (13 3 3 1) | Yes |

Deluge System Inspection

L-Con Bullets

| | |
|--|-----|
| Sprinkler heads free of corrosion, foreign material, paint or damage, no signs of leakage and heads installed in proper orientation? (5 2 1 1 1) | Yes |
| Minimum clearance maintained below all sprinklers? (5 2 1 2) | Yes |
| Number of replacement sprinkler heads per number installed in the head box comply 6 per 1-300 12 per 301 to 1,000 24 per > 1,000? (5 4 1 5) | Yes |
| Sprinkler head wrench for each type head provided in head box? (5 4 1 6) | Yes |
| System piping free of mechanical damage, leaks, corrosion, misalignment, or other loads or pipe hung from system? (5 2 2 1 and 5 2 2 2) | Yes |
| Pipe hangers and seismic braces secure and undamaged? (5 2 3 1) | Yes |
| Adequate heat to protect part of system containing water at a minimum temperature of 40° F? (4 1 1 1) | Yes |
| All sprinklers in this building been manufactured after 1920? (5 3 1 1 1.1) | Yes |
| Sprinklers in building are less than 50 years old, or if older has sprinkler sample been tested? (5 3 1 1 1) | Yes |
| If fast response sprinklers in building are 20 years old or older has sprinkler sample been tested? (5 3 1 1 1 3) | N/A |

Deluge valve

L-Con Bullets Firelock NXT 6" S/769

| | |
|---|-----|
| Water pressure gauge operating properly? (5 2 4 2) | Yes |
| System control valve have proper signs, accessible and free of leaks, has appropriate wrench and properly secured? (13 3 2 2) | Yes |
| System control valve in normal open/closed position? (13 3 2 2) | Yes |
| Pressure (psi) shown on Water Supply pressure gauge (13 4 3 1 3 1) | 160 |
| Exterior in good condition, all trim valves in normal position, valve seat not leaking and any electrical parts in service? (13 4 3 1 6) | Yes |
| Valve enclosure and heating equipment, during cold weather, maintain 40° F temperature? (13 4 3 1 1) | Yes |
| Drain Size | 2" |
| Hydraulic nameplate, if applicable, securely attached to sprinkler system and is legible? (5 2 6) | Yes |
| Is there adequate drainage available? (13 2 4) | Yes |
| Internal inspection - all components operate properly and move freely, and valve cleaned and in good condition? (13 4 3 1 7) | N/A |
| Trip test conducted with control valve fully opened? (13 4 3 2 2) | Yes |
| Pressure (psi) on supply side before start of test (13 4 3 1 3 1) | 160 |
| Under test conditions, heat detection system operated within 40 sec, or the flammable gas detection operate within time frame specified in system design? (10 3 4 1 1 and 10 3 4 1 2) | Yes |
| Time (sec) between start of detection system test and operation (10 3 4 1 3) | 5 |
| Time lapse (sec) between operation of detection system and water delivery to protected area (10 3 4 2) | 12 |
| Water spray discharge from nozzles flowing freely, positioned properly, and not obstructed? (13 4 3 2 2 3) | Yes |
| Pressure (psi) at hydraulically most remote nozzle during test (13 4 3 2 6 1) | 0 |
| Pressure (psi) at the deluge valve during test (13 4 3 2 6 2) | 130 |
| Full flow test pressure readings from hydraulically most remote nozzle and valve compare favorably to system requirements? (13 4 3 2 6 3) | N/A |
| System activated using the manual actuation devices? (13 4 3 2 8) | Yes |
| Maintenance performed on system after full flow test to ensure properly returned to service? (13 4 3 2 9) | Yes |
| Auxiliary drains operated and tested for leaks? (13 4 3 3 3) | Yes |
| Low temperature alarm, if installed in valve enclosure, tested before start of cold season? (13 4 3 2 13) | N/A |

Electric bell (Del)

L-Con Bullets Potter-Roemer 120 VAC

| | |
|--|-----|
| Electric bell operating properly and free of damage? (5 3 3 1) | Yes |
|--|-----|

Water Pressure Switch (Del)

L-Con Bullets Potter-Roemer PS-10-2

| | |
|---|-----|
| Did the switch pass a visual inspection conducted in accordance with manufacturer's requirements? | Yes |
| Did the switch pass operational tests when pressure is increased? | Yes |

Cntrl Viv (Del) - sealed**L-Con Finishing Building Clow 1992**

| | |
|--|----------|
| Valve type? | OS and Y |
| What is valve size? | 4" |
| Valve has proper signs, and is accessible? (13 3 2 2) | Yes |
| Valve is free of external leaks, and appropriate wrench available? (13 3 2 2) | Yes |
| Valve in normal open or closed position? (13 3 2 2) | Yes |
| Valve properly sealed? (13 3 2 2) | Yes |
| Valve lubricated, if required, and exercised through full range to ensure proper operation? (13 3 3 1) | Yes |

Cntrl Viv (Del) - sealed**L-Con Staging Warehouse Clow 1992**

| | |
|--|----------|
| Valve type? | OS and Y |
| What is valve size? | 6" |
| Valve has proper signs, and is accessible? (13 3 2 2) | Yes |
| Valve is free of external leaks, and appropriate wrench available? (13 3 2 2) | Yes |
| Valve in normal open or closed position? (13 3 2 2) | Yes |
| Valve properly sealed? (13 3 2 2) | Yes |
| Valve lubricated, if required, and exercised through full range to ensure proper operation? (13 3 3 1) | Yes |

| Wet System | |
|--|----------|
| Cntrl Vlv (Wet) - sealed | |
| Lab By Maintenance Shop Mueller | |
| Valve type? | OS and Y |
| What is valve size? | 6" |
| Valve has proper signs, and is accessible? (13 3 2 2) | Yes |
| Valve is free of external leaks, and appropriate wrench available? (13 3 2 2) | Yes |
| Valve in normal open or closed position? (13 3 2 2) | Yes |
| Valve properly sealed? (13 3 2 2) | Yes |
| Valve lubricated, if required, and exercised through full range to ensure proper operation? (13 3 3 1) | Yes |
| Electric bell (Wet) | |
| Lab By Maintenance Shop Potter-Roemer 120 VAC | |
| Electric bell operating properly and free of damage? (5 3 3 1) | Yes |
| Wet Riser Main Drain/Check Valve | |
| Lab By Maintenance Shop Victaulic 2 1/2" 717HR | |
| Exterior of valve in good condition and both gauges operable? (5 2 4 1 and 13 4 1 1) | Yes |
| Pressure (psi) shown on System side pressure gauge | 160 |
| Pressure (psi) shown on Water Supply pressure gauge | 160 |
| Drain Size | 1 1/4" |
| Hydraulic nameplate, if applicable, securely attached to sprinkler system and is legible? (5 2 6) | Yes |
| Is there adequate drainage available? (13 2 4) | Yes |
| Wet System Inspection | |
| Lab By Maintenance Shop | |
| Sprinkler heads appear free of corrosion, foreign material, paint or damage, no signs of leakage and heads/deflectors installed in proper orientation? (5 2 1 1) | Yes |
| Minimum clearance maintained below all sprinklers? (5 2 1 2) | Yes |
| # replacement sprinkler heads per number installed in the head box comply 6 per 1-300 12 per 301 to 1,000 24 per > 1,000? (5 4 1 5) | Yes |
| Sprinkler head wrench for each type head provided in head box? (5 4 1 6) | Yes |
| System piping and fittings free of mechanical damage, leaks, corrosion, misalignment, or other loads or pipe hung from system? (5 2 2) | Yes |
| Pipe hangers and seismic braces secure and undamaged? (5 2 3) | Yes |
| Adequate heat to maintain minimum building temperature of 40° F, and building free of conditions exposing pipe to freezing? (4 1 1 1) | Yes |
| All sprinklers in building appear to be manufactured after 1920? (5 3 1 1 1 1) | Yes |
| Sprinklers in building are less than 50 years old, or if older has sprinkler sample been tested? (5 3 1 1 1) | Yes |
| If fast response sprinklers in building are 20 years old or older has sprinkler sample been tested? (5 3 1 1 1 3) | N/A |
| If dry sprinklers are installed in building, and have been in service for 10 years, has sprinkler sample been tested? (5 3 1 1 1 6) Date tested, if applicable | N/A |

Alarm Valve

L-Con Finishing Building Victaulic 4" 751

| | |
|--|-----|
| Water pressure gauges operating properly? (13 4 1 1) | Yes |
| Pressure (psi) shown on Water Supply pressure gauge | 160 |
| Pressure (psi) shown on System side pressure gauge | 160 |
| Exterior of valve in good condition all trim valves in normal position, valve seat not leaking and any electrical parts in service? (13 4 1 1) | Yes |
| System control valve have proper signs, is accessible and free of leaks, has appropriate wrench and properly secured? (13 4 1 1) | Yes |
| Retard chamber and alarm drains free from leakage? (13 4 1 1) | Yes |
| Drain Size | 2" |
| Hydraulic nameplate, if applicable, securely attached to sprinkler system and is legible? (5 2 6) | Yes |
| Is there adequate drainage available? (13 2 4) | Yes |

Water Motor Alarm - mechanical (Wet)

L-Con Finishing Building Victaulic 760

| | |
|---|-----|
| Water motor alarm free of damage? (5 2 5) | Yes |
| Water flow activate alarm when open test connection/bypass? (5 3 3 3) | Yes |

Wet System Inspection

L-Con Finishing Building

| | |
|--|-----|
| Sprinkler heads appear free of corrosion, foreign material, paint or damage, no signs of leakage and heads/deflectors installed in proper orientation? (5 2 1 1) | Yes |
| Minimum clearance maintained below all sprinklers? (5 2 1 2) | Yes |
| # replacement sprinkler heads per number installed in the head box comply 6 per 1-300 12 per 301 to 1,000 24 per > 1,000? (5 4 1 5) | Yes |
| Sprinkler head wrench for each type head provided in head box? (5 4 1 6) | Yes |
| System piping and fittings free of mechanical damage, leaks, corrosion, misalignment, or other loads or pipe hung from system? (5 2 2) | Yes |
| Pipe hangers and seismic braces secure and undamaged? (5 2 3) | Yes |
| Adequate heat to maintain minimum building temperature of 40° F, and building free of conditions exposing pipe to freezing? (4 1 1 1) | Yes |
| All sprinklers in building appear to be manufactured after 1920? (5 3 1 1 1 1) | Yes |
| Sprinklers in building are less than 50 years old, or if older has sprinkler sample been tested? (5 3 1 1 1) | Yes |
| If fast response sprinklers in building are 20 years old or older has sprinkler sample been tested? (5 3 1 1 1 3) | N/A |
| If dry sprinklers are installed in building, and have been in service for 10 years, has sprinkler sample been tested? (5 3 1 1 1 6) Date tested, if applicable | N/A |

Alarm Valve

L-Con Staging Warehouse Victaulic 6" 751

| | |
|--|-----|
| Water pressure gauges operating properly? (13 4 1 1) | Yes |
| Pressure (psi) shown on Water Supply pressure gauge | 160 |
| Pressure (psi) shown on System side pressure gauge | 160 |
| Exterior of valve in good condition all trim valves in normal position, valve seat not leaking and any electrical parts in service? (13 4 1 1) | Yes |
| System control valve have proper signs, is accessible and free of leaks, has appropriate wrench and properly secured? (13 4 1 1) | Yes |
| Retard chamber and alarm drains free from leakage? (13 4 1 1) | Yes |
| Drain Size | 2" |
| Hydraulic nameplate, if applicable, securely attached to sprinkler system and is legible? (5 2 6) | Yes |
| Is there adequate drainage available? (13 2 4) | Yes |

Water Motor Alarm - mechanical (Wet)

L-Con Staging Warehouse Victaulic 760

| | |
|---|-----|
| Water motor alarm free of damage? (5 2 5) | Yes |
| Water flow activate alarm when open test connection/bypass? (5 3 3 3) | Yes |

Wet System Inspection

L-Con Staging Warehouse

| | |
|--|-----|
| Sprinkler heads appear free of corrosion, foreign material, paint or damage, no signs of leakage and heads/deflectors installed in proper orientation? (5 2 1 1) | Yes |
| Minimum clearance maintained below all sprinklers? (5 2 1.2) | Yes |
| # replacement sprinkler heads per number installed in the head box comply 6 per 1-300 12 per 301 to 1,000 24 per > 1,000? (5 4 1 5) | Yes |
| Sprinkler head wrench for each type head provided in head box? (5 4 1 6) | Yes |
| System piping and fittings free of mechanical damage, leaks, corrosion, misalignment, or other loads or pipe hung from system? (5 2 2) | Yes |
| Pipe hangers and seismic braces secure and undamaged? (5 2 3) | Yes |
| Adequate heat to maintain minimum building temperature of 40° F, and building free of conditions exposing pipe to freezing? (4 1 1 1) | Yes |
| All sprinklers in building appear to be manufactured after 1920? (5 3 1 1 1 1) | Yes |
| Sprinklers in building are less than 50 years old, or if older has sprinkler sample been tested? (5 3 1 1 1) | Yes |
| If fast response sprinklers in building are 20 years old or older has sprinkler sample been tested? (5 3 1 1 1 3) | N/A |
| If dry sprinklers are installed in building, and have been in service for 10 years, has sprinkler sample been tested? (5 3 1 1 1 6) Date tested, if applicable | N/A |

| Main Drain Test | | | | | | | |
|----------------------------------|---------------------------|-----------|--------|----------|-----------------|-------------------------------------|---------------------------|
| Type | Area/Location | Pipe Size | Static | Residual | Return pressure | Time (secs.) return static pressure | Without reduction of flow |
| Wet Riser Main Drain/Check Valve | Lab By Maintenance Shop | 1 1/4" | 160 | 150 | 160 | 1 | Yes |
| Alarm Valve | L-Con Finishing Building | 2" | 160 | 150 | 160 | 1 | Yes |
| Alarm Valve | L-Con Staging Warehouse | 2" | 160 | 150 | 160 | 1 | Yes |
| Deluge valve | HDO Solvent Recycle Pumps | 3/4" | 0 | 0 | 0 | 0 | N/A |
| Deluge valve | HI Charge Pumps | 3/4" | 0 | 0 | 0 | 0 | N/A |
| Deluge valve | L-Con Bullets | 2" | 160 | 150 | 160 | 1 | Yes |

| Supervisory Devices | | | | |
|------------------------|--------------------------|---------|---------|-------------------|
| Type | Area Location | Address | Testing | Visual Inspection |
| Waterflow Alarm Switch | Lab By Maintenance Shop | | Pass | Yes |
| Waterflow Alarm Switch | L-Con Staging Warehouse | | Fail ① | Yes |
| Waterflow Alarm Switch | L-Con Finishing Building | | Fail ① | Yes |

① NEW GANGES INSTALLED Locally. 8/14/15
 ① All Tested Good Jdw

Deficiencies

Waterflow Alarm Switch

L-Con Finishing Building Potter-Roemer VSR

Water flow activate alarm when open test connection/bypass? (5.3.3) Answer: Fail - *OLDER GONGS - ORDERED NEW ONE.*

Tech Response Alarm not wired - *GONGS INSTALLED AND TESTED IN THE FIELD. LOCAL ALARM ONLY*
Cntrl Viv (Del) - sealed

HDO Solvent Recycle Pumps Victaulic Series 728

Valve in normal open or closed position? (13.3.2.2) Answer No - *SYSTEM ISOLATED - PIPING DAMAGED 4/2/15 1st FIRE*

Tech Response

Waterflow Alarm Switch

L-Con Staging Warehouse Potter-Roemer VSR

Water flow activate alarm when open test connection/bypass? (5.3.3) Answer: Fail - *REPLACED GONGS AND TESTED*

Tech Response Alarm not wired - *LOCAL ALARM ONLY (GONGS)*

Water Pressure Switch (Del)

HDO Solvent Recycle Pumps System Sensor EPS-10-2

Did the switch pass operational tests when pressure is increased? Answer No - *SYSTEM ISOLATED - PIPING FIRE DAMAGE*

Tech Response Switch not wired - *LOCAL TRIP - COULD NOT TEST - PIPE BURST OPEN END*

Deluge System Inspection

HI Charge Pumps

Pipe hangers and seismic braces secure and undamaged? (5.2.3.1) Answer No

Tech Response Hanger off on 2" main on corner of building - *FIRE DAMAGE TO PIPING FROM 4/2 FIRE*
Air Pressure Alarm Device (Del)

L-Con Bullets Potter-Roemer PS-40-2

Low air pressure alarm operates? (13.4.3.2.13) Answer No - *LOCAL GONG TESTED*

Tech Response Alarm not wired

Deluge valve

HDO Solvent Recycle Pumps Firelock NXT 2" S/769

System control valve in normal open/closed position? (13.3.2.2) Answer No - *SYSTEM ISOLATED BECAUSE OF 4/2 FIRE*

Tech Response System off due to the removal of the Solvent Recycle Pumps

Deluge valve

HI Charge Pumps Firelock NXT 2" S/769

System control valve in normal open/closed position? (13.3.2.2) Answer No - *SYSTEM ISOLATE BECAUSE OF 4/2/15 FIRE*

Tech Response Valve is blocked in due to leak on system (operations)

Water Pressure Switch (Del)

HI Charge Pumps System Sensor EPS-10-2

Did the switch pass operational tests when pressure is increased? Answer No - *SYSTEM ISOLATED BECAUSE OF 4/2/15 FIRE*

Tech Response Switch not wired

Cntrl Viv (Del) - sealed

HI Charge Pumps Victaulic Series 728

Valve in normal open or closed position? (13.3.2.2) Answer No - *SYSTEM ISOLATED BECAUSE OF 4/2/15 FIRE*

Tech Response

NOTES: 8/14/15

- 1) ALL FIRE WATER STATIONS HAVE LOCAL GONGS ^{ALARMS} INSTALLED
- 2) FIRE DAMAGE PREVENTED SYSTEMS FROM BEING TESTED IN THE OPERATING AREAS.

John A. Wilkins

Liability Release Statement

The owner and/or designated representative acknowledges the responsibility of the operating condition of the component parts at the time of this inspection. It is agreed that the inspection service provided by the contractor as prescribed herein is limited to performing a visual inspection and/or routine testing, and any investigation or unscheduled testing, modification, maintenance, repair, etc., of the component parts is not included as part of the inspection work performed. It is further understood that all information contained herein is provided to the best of the knowledge of the party providing such information.



6/15/15

Customer: Howard Wilkinson



6/15/15

Technician: Brett Young